



Missouri Department of Natural Resources

## Total Maximum Daily Load Information Sheet

### Pole Cat Slough (formerly Ditch to Buffalo Ditch)<sup>1</sup>

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#### Water Body Segment at a Glance:

<b>County:</b>	Dunklin
<b>Nearby Cities:</b>	Kennett and Senath
<b>Length of impaired segment:</b>	12.6 miles
<b>Pollutant:</b>	Low Dissolved Oxygen
<b>Source:</b>	None given
<b>Water Body ID:</b>	3120



State Map Show Location of Watershed

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**Scheduled for TMDL development: 2014**

#### Description of the Problem

##### Beneficial uses of Pole Cat Slough

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life
- Protection of Human Health (Fish Consumption)
- Whole Body Contact Recreation

##### Use that is impaired

- Protection of Warm Water Aquatic Life

##### Standards that apply

- In the Missouri Water Quality Standards, or WQS, found in 10 CSR 20-7.031 Table A, the criterion for dissolved oxygen, or DO, in streams is a minimum of 5 mg/L (milligrams per liter or parts per million).

##### Background information and water quality data

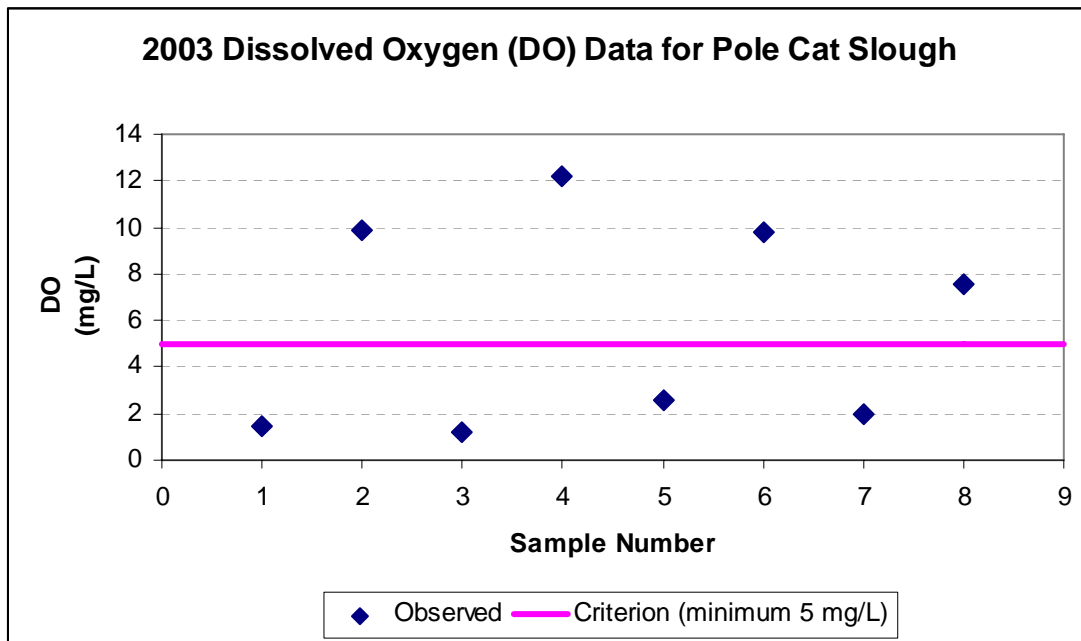
Pole Cat Slough is in Missouri's bootheel, a low-lying area between the Mississippi and St. Francis rivers. Starting in 1893, the entire landscape was transformed into farmland by logging and constructing an extensive system of drainage ditches and diversion channels. These water bodies have low rates of reaeration (where the water gains oxygen), they experience high water

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<sup>1</sup> The name for this tributary was changed to Pole Cat Slough in the most recent WQS revision, effective Oct 30, 2009., to be in harmony with USGS topographic maps. The mileage was also corrected from 12 miles to 12.6, based on more accurate measuring tools.

temperatures during the summer and they receive nutrients and sediment from agricultural runoff. All of these things contribute to low oxygen levels.

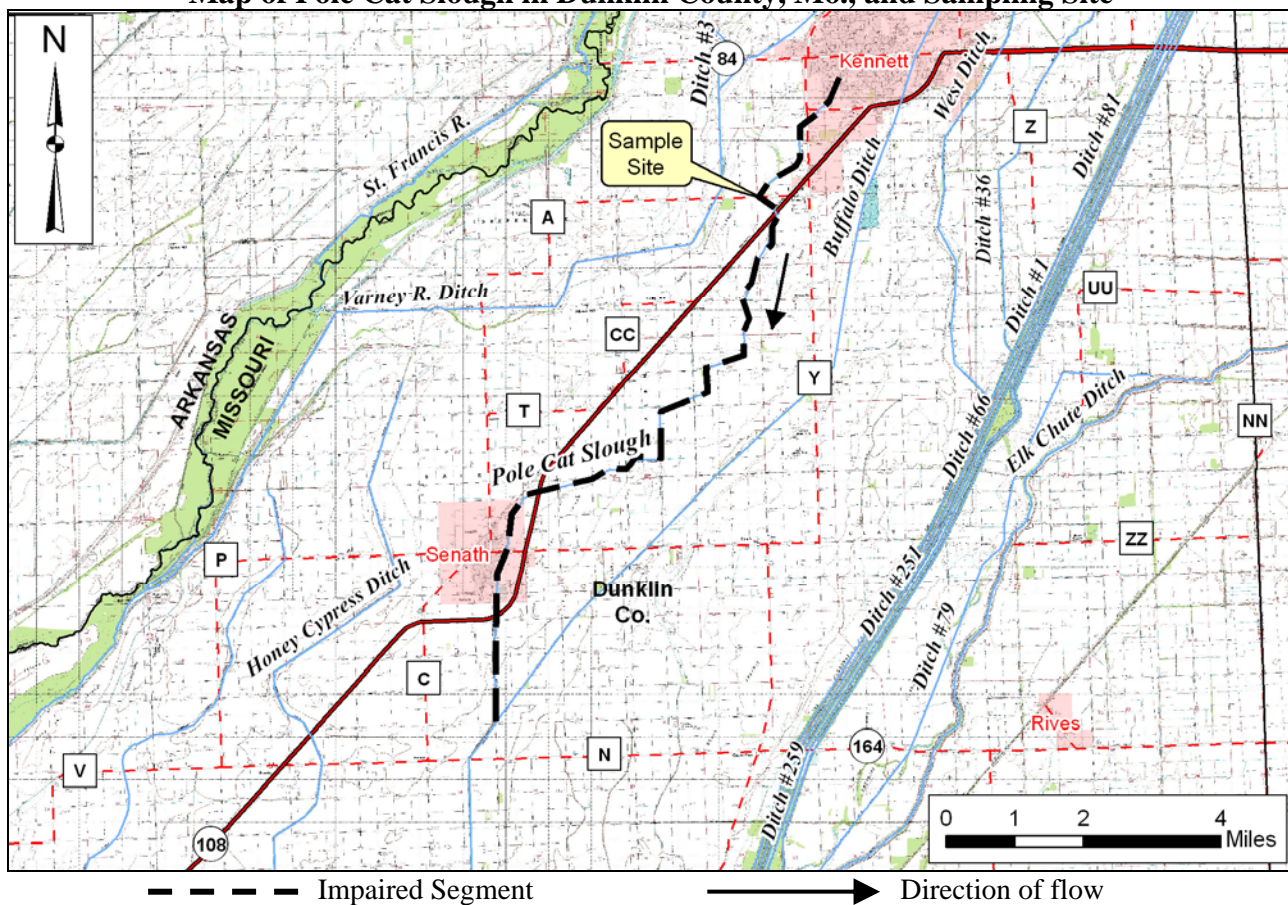
Oxygen levels in Pole Cat Slough do not always meet the water quality criterion of 5 mg/L. Dissolved oxygen is important as many aquatic organisms require high levels of oxygen to survive. For dissolved oxygen, if more that 10 percent of measurements in a water body fail to meet the water quality criterion that water body is judged to be impaired. In the case of Pole Cat Slough, four of eight samples (50 percent) gathered by the department during low flow studies in July and Aug. 2003 did not meet the water quality criterion. Although no source for the low dissolved oxygen impairment is identified on the 2008 303(d) List, it should be noted that the impairment was assessed based on data collected just downstream of the city of Kennett.



**Dissolved Oxygen data from Pole Cat Slough, collected in 2003**

<b>Sample Number</b>	<b>Sample Date</b>	<b>DO* (mg/L)</b>
1	7/8/2003	1.42
2	7/8/2003	9.9
3	7/9/2003	1.2
4	7/9/2003	12.2
5	8/12/2003	2.6
6	8/12/2003	9.8
7	8/13/2003	2
8	8/13/2003	7.6
*Shaded Cells Show Exceedance		

### Map of Pole Cat Slough in Dunklin County, Mo., and Sampling Site



**Sample Sites**  
1 – Pole Cat Slough at State Highway A

#### For more information call or write:

Missouri Department of Natural Resources

Water Protection Program

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573-522-9920 fax

Program Home Page: [www.dnr.mo.gov/env/wpp/index.html](http://www.dnr.mo.gov/env/wpp/index.html)